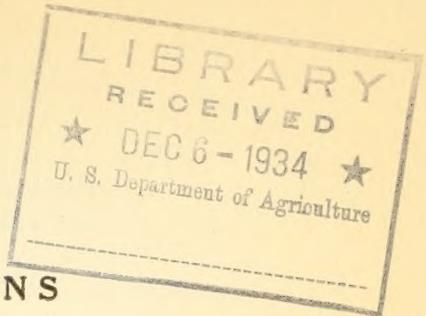


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## PLANT INTRODUCTIONS

TWENTY-THIRD  
ANNUAL DESCRIPTIVE LIST

Season 1934-5

Containing Descriptions of the More Important  
Introduced Plants Now Ready  
for Listed Experimenters

Division of Plant Exploration and Introduction  
Bureau of Plant Industry  
United States Department of Agriculture  
Washington, D. C.

All plants sent out by this Division to experimenters are inspected at the Plant Introduction Gardens by officers of the Bureau of Entomology and Plant Quarantine. At the time this Annual List goes to press the inspection has not been made. It is possible, therefore, that quarantine regulations may prevent the sending out of a few plants herein described.

## PLANT INTRODUCTIONS.

Experimenters will please read carefully this introductory note before sending in their requests for plant material.

This the Twenty-third Annual List of Plant Introductions, contains descriptions of many new and rare plants, not yet widely tested in this country. The available information concerning some of them is meager, and it is therefore impossible to speak with assurance regarding their value, their cultural requirements, and their adaptability to the various climates and soils of the United States.

These plants have been imported because it is believed some direct or indirect use can be made of them. They are first placed at the disposal of the experts engaged in plant breeding, crop acclimatization, and horticultural investigations generally in the United States Department of Agriculture and the State Experiment Stations. Some of them have been grown in sufficient quantity, however, so that they can be distributed to some private experimenters who have the facilities to test them carefully. The List is therefore sent to those who have qualified as experimenters with the Division of Plant Exploration and Introduction, and who have indicated a willingness to care for material sent them.

Accompanying this Annual List are complete Check Lists showing all plants available for distribution at the several Plant Introduction Gardens during the season 1934-5 and the Garden from which available. Applicants for material should fill out all blanks at the top of the Check List of each garden from which they request plants, place a mark to the left of the P. I. (Plant Introduction) number of each plant desired, and return the lists promptly to this Division. Items marked with an asterisk (\*) are available in somewhat larger numbers, for propagating purposes, to interested nurserymen having exceptional facilities.

It should be distinctly understood that the Division does not agree to supply all the plants requested. It reserves the right to limit the number or to withhold the entire request of any experimenter in order that it may place the material according to its best judgment.

The shipping season extends, as a rule, from December first to April first. Because of the large quantity of plants which must be handled, it is difficult for the Division to single out individual requests and ship them at a certain date; where there are valid reasons, however, for requesting that material be sent at a specified time, every effort will be made to meet the requests.

These plants are placed in the hands of experimenters with the understanding that reports on their behavior will be sent to this Division from time to time. It is particularly desired that reports be sent regarding the flowering, fruiting, hardiness, utilization and other interesting features of plants which have been sent for trial; and it is expected that experimenters will at all times preserve the original labels sent with the plants, or accurate plats showing the location and P. I. number of each one. Failure to comply with these directions will be considered sufficient reason for a discontinuance of the cooperative relation.

It will be necessary for experimenters to preserve and refer to the Annual Lists of Plant Introductions or to the Inventories published by the Division, for information regarding the plants. Each Inventory lists the seeds and plants imported during a period of three months. Its object is to serve as an historical record; it is not printed immediately following the arrival of the plants, but eighteen to twenty-four months later. The edition is limited, and it cannot be supplied to all experimenters. This makes essential the preservation of the annual descriptive list as a work of reference, and the Division desires to urge upon its cooperators the importance of this step. Unless the Annual lists are preserved, the Division later will be flooded with inquiries from persons who have received plants and who desire information concerning them. Answering such inquiries involves much unnecessary labor and expense.

For convenience in using the descriptive list, after each description is given in parenthesis the name of the garden or gardens at which the plants are being grown.

Descriptive List

Numbers preceding plant names are P. I. numbers and, in correspondence concerning any plant, both number and name always must be given.

Nurserymen please see statement at end of paragraph 3 of introductory note, concerning items marked with an asterisk (\*).

62961. ACACIA PENNINERVIS. From Richmond, Victoria, Australia. Presented by F. H. Baker. The bark of this Australian acacia is reported to contain 18 percent of tannic acid; furthermore, it is said to endure comparatively low temperatures. It is a tall shrub or tree, with narrow sickle-shaped phyllodia and short racemes of pale-yellow flowers. (Chico, Calif.)

102739. ACER CISSIFOLIUM.\* Maple. From Manchuria. Purchased from Manshu Nosan Shokai, Inc., Dairen. A Japanese maple of compact rounded habit becoming 30 feet or more high, with leaves composed of three leaflets up to 4 inches long. The minute flowers are produced in May with the leaves; the keys, about 1 inch long, occur in long racemes. In autumn the foliage turns red and yellow. For trial in all except the warmest parts of the southern states. (Glenn Dale, Md.)

85679. ACER CRATAEGIFOLIUM. Maple. From Japan. Obtained from the Chugai Shokubutsu Yen, Nurserymen. A small tree 30 to 35 feet high, with purplish branchlets, subcordate leaves with 2 to 4 lobes near the base, racemes of yellowish white flowers and fruits with nearly horizontal wings. Native to Japan. For trial in the upper south and the milder parts of the northern states. (Glenn Dale, Md.)

91521. ACER DIABOLICUM PURPURASCENS. Red-devil maple. From Dairen, Manchuria. Obtained from Manshu Nosan Shokai, Inc. A tree up to 30 feet high, with red flowers appearing before the leaves which are 5-lobed and reddish while young. The fruits, with spreading wings and bristly nutlets, are purplish while young. It is native to Japan. For trial in the milder parts of the northern states and in the upper South. (Glenn Dale, Md.)

91242 and 95541. ACER NIKOENSE. Maple. From Japan. Procured from the Chugai Shokubutsu Yen, near Kobe. A tree up to 50 feet high, native to Japan and central China, with attractive foliage which becomes brilliant red or purple in the autumn. For trial in the upper South and the milder parts of the northern states. (Glenn Dale, Md.)

90334. ACER PICTUM MONO. Maple. From Hopei Province, China. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A tree up to about 60 feet high, that belongs in the same group of maples as the sugar and Norway maples. Its leaves are much smaller than theirs and are more simply lobed. For trial in the milder parts of the northern states and in the upper south. (Glenn Dale, Md.)

91522. ACER RUFINERVE. Maple. From Dairen, South Manchuria. Procured from Manshu Nosan Shokai, Inc. A small deciduous Japanese maple with small bluish white young shoots, and dark green irregularly serrate, 3-lobed or obscurely 5-lobed leaves. The keys are up to three-fourths of an inch long. Occasionally the young foliage, the leaf-stalks, and the mid-ribs are red. For trial in the upper south and the milder parts of the northern states. (Glenn Dale, Md.)

90655. ACER TRIFLORUM. Maple. From Manchuria. Obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, from the Forestry Department of the Agricultural Experiment Station of the South Manchurian Railway. A tree up to 25 feet high, with glabrous branchlets. The leaves are made up of 3 oblong-lanceolate leaflets with entire or coarsely toothed margins, and the flowers, in groups of 3, are followed by densely pubescent fruits having wide-spreading, nearly straight wings about 2 inches long. It is native to Chosen and Manchuria. For trial throughout the northern states. (Few plants available.) (Glenn Dale, Md.)

46864. ACTINIDIA CHINENSIS. Yang-tao. Originally from Ichang, China. An ornamental deciduous climber with rather large dark-green leaves. The fragrant yellowish to white flowers are about an inch across and the pistillate and staminate are borne on different plants. The russet-brown, hairy, edible fruits are 2 inches long and have greenish flesh with a pleasant distinctive flavor. They are eaten fresh or cooked. These plants are seedlings. For trial in the milder parts of the Pacific coast and of the southern states. (Chico, Calif.)

92303. ACTINIDIA CHINENSIS X ARGUTA. This hybrid, between widely different species, was made by Dr. David Fairchild of the Bureau of Plant Industry, with the idea that some of the second generation might prove to have the hardiness of the staminate parent (Actinidia arguta) and the large fruited character of the pistillate parent (A. chinensis). The hybrid has not yet fruited. The present plants are grown from cuttings of one of the original plants and are offered for their possible value. Grow the plants in a rich well-drained loam and give plenty of water. For trial in the South and on the Pacific coast. (Chico, Calif., and Glenn Dale, Md.)

78856. AGAPANTHUS AFRICANUS. African lily. From England. Obtained from Clarence Elliott, Ltd., Six Hills Nursery, Stevenage, Herts. Variety Mooreanus. A dwarf form of the type, reputed to be winter-hardy, 1½ feet high, with short, straplike leaves and dark-blue flowers in fair-sized umbels. For trial from the Ohio river southward. (Glenn Dale, Md.)

97944. ALNUS HIRSUTA SIBIRICA. From Japan. Presented by M. Tozawa, Director, Forest Experiment Station, Keijo. A handsome tree, native to Siberia, 60 feet high, of broad-pyramidal habit and vigorous growth, with broadly ovate leaves about 5 inches long, which are dark green above and glaucous beneath. For trial in all except the coldest parts of the northern states. (Glenn Dale, Md.)

103099. ALOE BROOMII. Liliaceae. From the Union of South Africa. Presented by the McGregor Museum, Kimberley. An erect or ascending plant with a short trunk, bearing a dense rosette of ovate-lanceolate, unspotted, glaucous or reddish leaves up to 5 inches long. The yellow flowers are in dense racemes on a short thick scape. For indoor culture only except in the Gulf region and southern California. (Glenn Dale, Md.)

103101. ALOE PRETORIENSIS. From the Union of South Africa. Presented by the McGregor Museum, Kimberley. An aloe with dense rosettes of tapering leaves, usually withered at the red tips, and a stoutish stem 4 to 5 inches in diameter. The dark-brown to black stem is extremely rough, and clothed throughout its entire length by the remains of withered leafstalks. The most distinctive feature of the plant is its tall branched inflorescence with dense racemes of bright-scarlet flowers. For indoor culture only except in the Gulf region and in southern California. (Glenn Dale, Md.)

75953. ALOE SUCCOTRINA. From East Africa. Collected near Camp Mitchell, Mount Kenya, by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. A shrubby plant 3 feet or more high. The pale-green fleshy leaves are 1½ to 2 feet long by 2 inches wide and have marginal spines. The yellow flowers are in a dense raceme 6 to 12 inches long, terminating in a stout, simple or branched scape 2 to 4 feet high. It is useful for pot culture and may be grown in the open where the minimum temperature is above 30°F. Propagation is by seed or by suckers freely produced at base of plant. For trial indoors only except in frostless localities. (Supply very limited.) (Chico, Calif.)

103102. ALOE WICKENSII. From the Union of South Africa. Presented by the McGregor Museum, Kimberley. A handsome stemless succulent with a dense rosette of narrow sword-shaped pale-green leaves about 2 feet long, and yellow flowers in a dense raceme. For indoor culture only except in the Gulf region and in southern California. (Glenn Dale, Md.)

76931. ANIGOZANTHOS FLAVIDA. Amaryllidaceae. From Melbourne, Australia. Presented by Mrs. Frieda C. Blanchard. An herbaceous perennial, native to western Australia with a thick underground stem, linear radical leaves 1 to 2 feet long, and a 4-foot stalk bearing a much-branched panicle of tubular flowers. The flowers and stems of the panicle are covered with a greenish-red wool. For trial in the southern United States. (Chico. Calif.)

104557. ANTIRRHINUM ORONTIUM. Small snapdragon. From France. Received from Museum of Natural History, Paris. A slender annual 6 to 12 inches high, with linear leaves up to 2 inches long, and axillary purple flowers about one-half inch long. For trial throughout the United States. (Glenn Dale, Md.)

103178. ARTEMISIA SIVERSIANA.\* Asteraceae. From southwestern China. Collected by Dr. Joseph F. Rock, in the Moting Mountains, in Yunnan, and presented through Dr. T. H. Goodspeed, of the University of California. An alpine herb with yellow flowers, growing on grassy slopes in the Mekong Valley, at 9,000 feet altitude. (Glenn Dale, Md.)

77543. ARTHROPODIUM CIRRHATUM. Liliaceae. From Nelson, New Zealand. Presented by A. Wilkinson, New Zealand Alpine and Rock Garden Society. An herbaceous perennial bearing tall somewhat branched stalks, with small leafy bracts subtending the drooping white flowers. These are about 1 inch in diameter with slender tube and reflexed but spreading lobes and conspicuous stamens and pistil, somewhat like *Anthericum*. For trial in the southeastern states and the Pacific northwest. (Chico, Calif.)

106601. ARUM PALAESTINUM. Black calla. Received from Oraten & Co., Palestine. An ornamental aroid with cordate-hastate leaves 6 inches across the base and about the same in length. The lance-oblong tapering limb of the spathe is green outside and black-purple inside. The upper part of the spadix is black-purple and the flowers have a sweet fragrance. For trial in the lower south and in California. (Glenn Dale, Md.)

102740. BETULA JAPONICA MANDSHURICA. Birch. From Manchuria. Purchased from Manshu Nosen Shokai, Inc., Dairen. A white-barked birch up to 80 feet high with the leaves often broadly wedge-shaped at the base. Native to Hopeh Province, China. For trial in the upper South and in the milder parts of the northern states. (Glenn Dale, Md.)

102216. BETULA JAPONICA SZECHUANICA. Japanese white birch. From France. Presented by L. Parde, Directeur des ecoles Forestieres des Barres, Nogent-sur-Vernisson, Loiret. A tree up to 60 feet high, native to western China. The rhombic-ovate leaves, 2 to 3 inches long, are unequally dentate-serrate, and are densely glandular-punctate beneath. The dark dull-green color of the leaves persists until late autumn. For trial in the upper South and in the milder parts of the northern states. (Glenn Dale, Md.)

9662. BIGNONIA CHAMBERLAYNII. From Funchal, Madeira. Received through Barbour Lathrop and David Fairchild. A beautiful tropical climber, which produces clusters of tubular, bright-yellow flowers. Suitable for walls and trellises in southern California and southern Florida. (Chico, Calif.)

76954. BILLARDIERA LONGIFLORA. Pittosporaceae. From Tasmania. Presented by Mrs. Frieda Cobb Blanchard, University of Michigan, Ann Arbor, Mich. A twining shrub, sometimes several feet in length, with leaves varying from oval to linear and 2 inches long. The flowers, greenish yellow, often changing to purple, are pendulous on solitary stems an inch long. For trial in the Gulf region and in southern California. (Chico, Calif.)

78434. BRYOPHYLLUM DAIGREMONTIANUM. From Madagascar. Collected at Diego Suarez, Montagne des Francais, by Dr. Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. A brownish-green succulent perennial, native to Madagascar, becoming about 2 feet high. The leaves are petiolate, sometimes peltate, and the small deep-pink flowers are in lax terminal panicles. For indoor culture only except in southern California and southern Florida. (Glenn Dale, Md.)

100859. BUDDLEIA FALLOWIANA. Butterfly bush. From China. Collected by the sixth Forrest expedition in southwestern China, and presented by Lord Aberconway, Bodant, Tal-y-Cafn, N. Wales. A graceful shrubby plant with silvery woolly foliage and dense cylindrical spikes of small, bluish or white, fragrant flowers with orange centers. For trial in the southern states and on the Pacific coast. (Chico, Calif.)

98367. BUDDLEIA LINDLEYANA. Lindley butterflybush. From China. Presented by the Director, Botanic Garden, San Yat-Sen Memorial Park, Nanking. An upright shrub 6 to 8 feet high from Chekiang Province. The branchlets are four angled and slightly winged, and the ovate to oblong-lanceolate leaves are 2 to 4 inches long, with remotely denticulate margins. The purple-violet flowers are in rather dense upright spikes 6 to 8 inches long. For trial from Tennessee southward and on the Pacific coast. (Chico, Calif.)

23012. BUXUS HARLANDII.\* Box. From Hangchow, Chekiang, China. This Chinese species is almost as slow in growth as the dwarf box commonly used for edgings. It differs from this chiefly in its longer leaves, often  $1\frac{1}{2}$  inches long on vigorous shoots, and its tendency to form rather broad, flat-topped bushes. The species suffers from winter-killing near Washington, D. C., but has shown much promise in milder regions and especially in rather dry situations. For trial in the southern states and California. (Chico, Calif.)

66282 and 76598. BUXUS HARLANDII.\* From England. Presented by the late Hon. Vicary Gibbs, Aldenham House Gardens, Elstree, Herts. Some description as for preceding (P. I. No. 23012). (Glenn Dale, Md.)

79509. BUXUS HARLANDII.\* From England. Procured from Hillyer & Son, Winchester. Same description as for P. I. No. 23012. (Glenn Dale, Md.)

102922. CALLICARPA SP.\* From China. Collected by A. N. Steward, at Kuanyinchiao, Kiangsi Province. A deciduous shrub, with obovate, cuneate, acuminate, coarsely serrate dull-green leaves up to  $2\frac{1}{2}$  inches long. In foliage characters this resembles C. dichotoma. For trial in the southern states and in California. (Glenn Dale, Md.)

98162. CALLISTEMON CITRINUS. Lemon bottlebrush. From Australia. Presented by F. H. Baker, Richmond. An evergreen shrub or small tree up to 20 feet high, with lanceolate leaves 1 to 3 inches long, reddish when young, lemon-scented when crushed, and spikes, 2 to 4 inches long, of small flowers with long bright-red stamens. It holds its seed pods for several years. Native to southeastern Australia. For trial in California and the Gulf region. (Chico, Calif.)

101350. CALLISTEMON RUGULOSUS. Bottlebrush. From Australia. Presented by Edwin Ashby, Wittunga, Blackwood, South Australia. A shrub up to 12 feet high with narrowly lanceolate leaves 1 to 3 inches long and clusters of flowers having crimson filaments and yellow anthers. For trial in California and the Gulf region. (Chico, Calif.)

98220. *CALLITRIS JUNIPEROIDES*. Pinaceae. From the Union of South Africa. Presented by F. Walton Jameson, City Engineer, Kimberley. A widely branched tree 20 to 60 feet high, with spirally arranged glaucous-green leaves less than an inch long. The moderately hard yellowish wood is used for making furniture. It is native to the cedarburg Mountains of South Africa at 3,000 to 4,000 feet altitude. This region has cold damp winters and hot dry summers. For trial in southern California and the Gulf region. (Chico, Calif.)

98221. *CALLITRIS SCHWARZII*. From the Union of South Africa. Presented by F. Walton Jameson, City Engineer, Kimberley. A handsome cypress-like tree of pyramidal habit up to 50 feet high, with horizontal branches. It is closely related to *C. cupressoides*, differing in the structure of the cones and in being a larger tree. Native to the Cape of Good Hope. For trial in central and southern Florida and in southern California. (Chico, Calif.)

67069. *CALOTHAMNUS ASPER*. Myrtaceae. From Blackwood, South Australia. Presented by Edwin Ashby. A hairy shrub, with crowded, linear, flat leaves, and short dense clusters of flowers with crimson stamens. Native to Western Australia. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

101200. *CALOTHAMNUS ASPER*. From the same source as preceding (No. 67069). (Glenn Dale, Md.)

64478. *CALOTHAMNUS CHRYSANTHERUS*. From Blackwood, South Australia. Presented by W. L. Wheeler, through Edwin Ashby. A rather small erect shrub, native to Western Australia, with thick corky branches, and thick, terete, sharp pointed leaves 2 to 4 inches long. The chief beauty of the shrub lies in the bundles of deep-red stamens which protrude an inch or more from the yellowish flowers. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

67072. *CANDOLLEA CUNEIFORMIS*. Candolleaceae. From Blackwood, South Australia. Presented by Edwin Ashby. A much branched evergreen shrub up to 8 feet in height with crowded, sessile, wedge-shaped leaves, and terminal, bright-yellow, five-petaled flowers, somewhat like single roses. For trial in the Gulf states and California. (Chico, Calif.)

103600. *CAPPARIS GRANDIDIERI*. Capparidaceae. From Madagascar. Received from Henri Perrier de la Bathie, Tananarive. A spiny tree 25 to 30 feet high with linear-oblong, leathery, acuminate leaves 2 inches long, and rather large rosy flowers. For trial in extreme southern Florida and California. (Glenn Dale, Md.)

102357. *CARAGANA ARBORESCENS CUNEIFOLIA*. Presented by the Institute of Forest Culture, Moscow, U. S. S. R. A dwarf form of the well-known Siberian pea-tree with the leaflets quite uniformly wedge-shaped and the flowers on shorter stalks. This form was originally described from Dauria and Mongolia. For trial throughout the northern states. (Glenn Dale, Md.)

77176. *CARMICHAELIA ARBOREA*.\* Fabaceae. From Wanganui, New Zealand. Presented by the Town Clerk, Wanganui City Council. A New Zealand shrub up to 9 feet high, somewhat resembling Scotch broom, with thin flat green branches taking the place of leaves. The clusters of small pea-like lilac-striped flowers are followed by small black pods the sides of which drop off and expose the bright-red seeds surrounded by the dark margin of the pod. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

100620. *CASSIA ARTEMISIOIDES*. Wormwood senna. Presented by Edwin Ashby, "Wittunga," Blackwood, South Australia. An erect bushy shrub covered with silky white tomentum. The leaves are made up of 3 to 6 pairs of linear-terete leaflets 1 inch long, and the yellow flowers are in short dense racemes. It is native to Australia. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

102349. *CEPHALOCEREUS MILSPAUGHII*. From Bahama Islands. Collected by the Allison V. Armour Expedition. A large erect cactus with branching stems, 6 to 20 feet high, sometimes 8 inches thick at the base of the trunk. It has 8 to 13 ribs and a score of acicular brown-yellow spines, about 2 inches long, which rise from each gray-brown areole. The rather stiff greenish flowers, white within, and less than an inch long, are succeeded by small reddish globose fruits. Native to Bahama Islands. For indoor culture only except in southern California and southern Florida. (Glenn Dale, Md.)

101491. *CEREUS HEXAGONUS*. Cactaceae. From Egypt. Presented by Alfred Bircher, Middle Egypt Botanic Station, El Saff. A tall columnar cactus up to 45 feet high, branching at the base, the joints usually 6-angled. The flowers are 8 to 10 inches long with the outer segments purple and the inner ones white. The ovoid edible fruits are 3 to 6 inches long and have white or pinkish pulp. It is native to the West Indies and the northern part of South America. For indoor culture only except in southern California and southern Florida. (Glenn Dale, Md.)

62408. *CHRYSANTHEMUM MORIFOLIUM*. From China. Collected in the Western Hills between Ming Tombs and the Fa Huassu Temple, by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. A low herbaceous plant with basal tufts of evergreen foliage and widely branched 2-foot stalks of small pink to white single flowers from September until frost. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

72790. *CISTUS CORBARIENSIS*. Cistaceae. Rockrose. From Kew, England. Presented by the Director, Royal Botanic Gardens. A white-flowered shrub 2 feet high, native to Spain. For trial in the Gulf region and in California. (Chico, Calif.)

70900. *CISTUS SYMPHYTIFOLIUS*. Rockrose. From Orotava, Teneriffe, Canary Islands. Collected by David Fairchild, agricultural explorer. A species something like the more familiar *C. laurifolius* but with deep rose-red flowers, blotched yellow at the base, and somewhat narrower foliage. For trial in southern California and southern Florida. (Chico, Calif.)

76013. *CLEMATIS ARMANDI*. Armand clematis. From France. Purchased from Vilmorin-Andrieux & Co., Paris. An ornamental Chinese vine with fragrant white flowers. It is characterized by the abundance and the persistence of its foliage. For trial in the southern states and on the Pacific coast. (Chico, Calif.)

92772. CLEMATIS FARGESII. From France. Presented by Vilmorin-Andrieux & Co., Verrieres-le-Buisson, Seine-et-Oise. A woody climber up to 20 feet high, with bipinnate leaves made up of five to seven 3-foliolate or incisely serrate ovate leaflets. The pure white flowers, 1 to 2 inches across, are solitary or in 3-flowered clusters and are borne on a peduncle 4 to 8 inches long. Native to western China. For trial in the South and in the milder parts of the northern states. (Glenn Dale, Md.)

72793. CLEMATIS GRATA GRANDIDENTATA. From England. Presented by the Director, Royal Botanic Gardens, Kew. A climbing shrub, 9 to 30 feet high, with smooth leaves, silky hair on the veins, and cream-colored flowers 1 inch across, in axillary clusters of three, in leafless panicles. For trial on the Pacific coast and in the southern states. (Chico, Calif.)

102220. CLEMATIS KOREANA. From France. Received from Dir. des Ecoles, forestieres des Barres, Nogent-sur-Vernisson, Loiret, France. A prostrate vine, native to Chosen, with trifoliolate leaves having coarsely dentate, sharp-pointed leaflets 2 to 4 inches long, usually 3-lobed or 3-parted. The yellow to dull-violet, bell-shaped, nodding flowers, 1 to 2 inches long, are solitary and axillary. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

103939. CLEMATIS SIMENSIS.\* From Africa. Received from Kisantu, Bas-Congo, Belgian Congo, through Mr. J. E. Spingarn, Amenia, N. Y. A tropical climber with pinnately cut leaves; the membranous leaflets, usually 5 or 3, are ovate-lanceolate crenate. The flowers,  $\frac{1}{4}$ -inch across are in axillary clusters. Native to Abyssinia. For trial in the Gulf region and southern California. (Glenn Dale, Md.)

102221. CLEMATIS TANGUTICA OBTUSIUSCULA. From France. Received from Dir. des Ecoles, forestieres des Barres, Nogent-sur-Vernisson, Loiret. A handsome climbing shrub, native to Central Asia, with sharply cut compound leaves and very large solitary nodding flowers which are borne on erect stems 6 inches long, arched at the tip. The golden-yellow sepals are about 2 inches long, with recurved tips. For trial in the upper South and the milder parts of the northern states. (Glenn Dale, Md.)

76930. CLERODENDRUM FOETIDUM. Rose glorybower. From U. S. S. R. Presented by Geo. V. Heintz, Librarian, Government Botanic Garden, Nikita, Yalta, Crimea. A semi-hardy evergreen Chinese shrub 6 feet high, with cordate leaves 8 inches long, and dense capitate cymes of fragrant rosy-red flowers. When killed to the ground the young shoots bloom in the autumn of the same season. These plants are grown from cuttings. For trial in all except the warmest parts of the southern states and on the Pacific coast. (Glenn Dale, Md.)

56304. COTONEASTER BUXIFOLIA VELLAEA. Malaceae. From western China. Collected by J. F. Rock, agricultural explorer, Bureau of Plant Industry. An evergreen, more or less procumbent shrub with rather crowded small obovate gray-green leaves  $\frac{1}{2}$  inch long, densely hairy beneath, and small clusters of round dull-red berries  $\frac{1}{4}$  inch in diameter. Probably hardy as far north as the Ohio River. (Chico, Calif.)

99677. CRATAEGUS SP. Hawthorn. From Likiang, Yunnan, China. Presented by Dr. Joseph F. Rock. From the Forests of Youngming, Likiang Snow Range, at 10,000 feet altitude. A very handsome tree with brilliant red fruits. For trial in the southern states and on the Pacific coast. (Glenn Dale, Md.)

105596. *CUNNINGHAMIA LANCEOLATA.*\* Chinese-fir. From Kweichow Province, China. Presented by Albert N. Steward, College of Agriculture, University of Nanking, Nanking. A handsome evergreen forest tree related to Araucaria, 65 to 80 feet tall, and of broad pyramidal habit. The linear-lanceolate leaves are 1 - 3 inches long. The tree sprouts from the roots if cut back. For trial from Norfolk Va., southward and on the Pacific coast. (Glenn Dale, Md.)

67353. *CYTISUS MONSPESSULANUS.* Broom. From the Canary Islands. Presented by the Director, Cambridge Botanic Garden, England. A leguminous shrub about 10 feet high with fragrant bright-yellow flowers in small racemes. For trial in the southern United States. (Chico, Calif.)

74698. *DATISCA CANNABINA.* Daticaceae. From Cluj, Roumania. Presented by the Director, Botanic Garden, University of Cluj. A hardy herbaceous perennial 4 feet high, with inconspicuous greenish yellow flowers in dense spikelike racemes. The species is dioecious. It is native to the Himalayas. The roots are used as a source of yellow dye. For trial on the Pacific coast and in the lower south. (Chico, Calif.)

103515. *DODONAEA VIScosa.* Sapindaceae. Hopbush. From India. Collected at Bhadwar, Kangra, Punjab, at 2,000 feet altitude, by Dr. Walter Koelz, and presented by the University of Michigan, Ann Arbor, Mich. A shrub up to 15 feet high, with linear to oblanceolate, viscid leaves 2 to 6 inches long, and small lateral corymbs of yellowish flowers. It is cosmopolitan in the tropics, and in Australia the fruits are used in making yeast. The hard, brown, close-grained wood is used in India for engraving, turning, tool handles and walking sticks. For trial in central and southern Florida. (Glenn Dale, Md.)

81154. *ECHEVERIA AMOENA.* Crassulaceae. From Ventimiglia, Italy. Presented by S. W. McLeod Braggins, Superintendent, La Mortola. A nearly stemless succulent with small dense rosettes of thick leaves and slender scapes 4 to 8 inches high bearing 1 to 8 red flowers in racemes. Native to Mexico. For trial in southern California and southern Florida. (Chico, Calif.)

103406. *EHRETIA ELLIPTICA.* Boraginaceae. From Texas. Presented by Peter H. Heinz, Brownsville. Mexican names, Anaqua and Manzanillo. A shrub or tree up to 50 feet high, native to western Texas and northern Mexico. The thick oblong scabrous leaves are 1 to 4 inches long. The small white fragrant flowers are borne profusely and are followed by sweet edible yellow fruits about  $\frac{1}{2}$  inch in diameter. The wood is used for tool handles and wheel spokes. In southern Texas, young trees are used as ornamentals for planting on lawns. For trial in the southwest and the Gulf region. (Chico, Calif.)

101915. *ELEUTHERINE PALMIFOLIA.* Iridaceae. From the Philippine Islands. Presented by Dr. W. Dwight Pierce. A tropical irislike plant with white flowers an inch across, borne on a scape about 9 inches high. The one or two linear-lanceolate leaves are a foot or a foot and a half long. Native to the American Tropics and naturalized in the Philippines. (Glenn Dale, Md.)

95516. EUCALYPTUS ALGERIENSIS. From Algeria. Presented by Dr. R. Maire, University of Algiers, Algiers. A hybrid between Eucalyptus rostrata and E. rufa which has become naturalized in North Africa and now covers considerable areas of the hills around Algiers. It differs from E. rufa by its smooth trunk, its small flowers with the hemispherical operculum not beaked, and from E. rostrata by its buds which are white like those of E. rufa. Eucalyptus rufa flowers in the month of December, E. rostrata flowers in July and August, while E. algeriensis flowers in the spring. (These plants are in 5-in. pots and are rather large.) For trial in the southwest and the Gulf region. (Chico, Calif.)

103654. EUCALYPTUS GOMPHOCEPHALA. Tooart. From Australia. Obtained from Sinton & Son, Geelong, Victoria. A large, symmetrical Australian tree of fairly rapid growth, reaching a height of 100 to 120 feet. The wood is very heavy, tough, and strong and is difficult to split. It is used for shipbuilding, bridges, and docks. The tree will endure but little frost and prefers limestone soils. For trial in southern California and southern Florida. (Chico, Calif.)

104166. EUCALYPTUS GOMPHOCEPHALA. Tooart. Received from F. H. Baker, Richmond, Australia. Some description as for preceding (No. 103654.) (Chico, Calif.)

104167. EUCALYPTUS LEHMANNI. Lehmann gum. Received from F. H. Baker, Richmond, Australia. A large shrub or small tree with rough reddish bark peeling off in irregular sheets. The greenish yellow flowers open from July to September. Native to Western Australia. For trial in the milder parts of the southwest and in southern Florida. (Chico, Calif.)

104170. EUCALYPTUS PATENS. From F. H. Baker, Richmond, Australia. An Australian tree up to 100 feet high, with falcate-lanceolate leaves 6 inches long, short panicles of small flowers, and flat-topped globular fruits. The tough durable wood is used by wheelwrights. For trial in the milder parts of the southwest and in southern Florida. (Chico, Calif.)

104171. EUCALYPTUS PREISSIANA. Received from F. H. Baker, Richmond, Australia. A shrubby eucalyptus about 8 feet high, with rigid branchlets, shining-green oblong-elliptic leaves nearly 4 inches long, and small yellowish flowers in axillary clusters. Native to southern Australia. For trial in the southwest and in central and southern Florida. (Chico, Calif.)

103913. FICUS SP.\* From Africa. Received from K. H. Prior, Bela Vista, Angola. Native name Ukuyu. A tropical tree, unidentified as to species, which in the young stage has ovate to oblong-ovate, sinuate-dentate or entire, rather thin leaves, 5 to 7 inches long. For trial in southern Florida and southern California. (Glenn Dale, Md.)

90790. FORSYTHIA OVATA.\* From Japan. Presented by the Director, Forest Experiment Station, Keijo, Chosen. A shrub about 6 feet high with spreading branches, yellowish gray branchlets, ovate serrate, or nearly entire leaves, 2 to 3 inches long, and amber-yellow flowers, 1 inch long, which appear very early in the spring. It is native to Chosen. For trial in all except the coldest parts of the northern states. (Glenn Dale, Md.)

82477. FORSYTHIA VIRIDISSIMA KOREANA.\* From Chosen. Presented by the Director, Forest Experiment Station, Keijo. An upright shrub, under 10 feet high, with more or less spreading branches. The leaves are 2 to 5 inches long, elliptic-ovate to oblong-lanceolate, broadest below the middle, and usually serrate beyond the middle but sometimes entire. The flowers are bright yellow, with the calyx more than half the length of the corolla tube. This shrub is said to be about as showy as Forsythia suspensa. For trial in all except the coldest parts of the northern states, in the upper South, and on the Pacific coast. (Glenn Dale, Md.)

104143. FORSYTHIA VIRIDISSIMA KOREANA.\* From Japan. Received from Dr. T. Kaburaki, Keijo, Chosen. Description same as for the preceding (P. I. No. 82477). (Glenn Dale, Md.)

99230. GAULTHERIA SP. Ericaceae. From Kweichow Province, China. Presented by Albert N. Steward, Department of Botany, College of Agriculture, University of Nanking, Nanking. Found growing at 2,800 feet altitude. A deciduous shrub about 7 feet tall with ovate-lanceolate acuminate leaves and black fruits. The leaves are aromatic when crushed. In foliage and stem characters the plant is much like Gaultheria cumingiana. For trial in the South and the milder parts of the northern states. (Glenn Dale, Md.)

99662. GAULTHERIA PYROLOIDES. From India. Presented by G. Ghose & Co., Town-end, Darjeeling. A low evergreen shrub less than a foot high with narrow-elliptic leaves 1 to 2 inches long and large blue-black fruits. Native to the Himalayas. For trial in the Gulf region and the milder parts of the Pacific coast. (Glenn Dale, Md.)

100580. GLAUCOTHEA ARMATA. Blue palm. From Baja California, Mexico. Obtained from Howard E. Gates, Anaheim, Calif. A stout fan-palm with a robust trunk up to 8 feet in diameter and 20 feet high, crowned by numerous glaucous-blue leaves, nearly circular in outline and deeply cut into many segments. The flowers are dull purple. For trial in central and southern Florida and southern California. (Glenn Dale, Md.)

105666. GLYCYRRHIZA ECHINATA. Received from Bodnant Gardens, North Wales. Originally collected in China. An herbaceous leguminous perennial with tall upright stems and compound leaves having 5 - 6 pairs of elliptic leaflets. The small bluish flowers are in compact spherical heads. For trial in the upper South and the milder parts of the northern states. (Glenn Dale, Md.)

103009. HEPE VENUSTULA.\* Scrophulariaceae. From New Zealand. Presented by A. Wilkinson, Tauranga. A small compact shrub 6 to 9 inches high, native to New Zealand. The oblong-ovate leathery leaves, less than 1 inch long, are close-set on the branches and the small white flowers are in terminal much-branched racemes. For trial in the southern states and on the Pacific coast. (Glenn Dale, Md.)

82049. HELENIUM AUTUMNALE.\* Sneezeweed. From Dedemsvaart, Netherlands. Purchased from B. Ruys, Royal Moerheim Nurseries. Variety Autumn Sunshine. An herbaceous perennial 2 to 2½ feet high, much branched but compact in habit, the branches winged and the leaves light green. The numerous pure yellow flower heads, terminal on the branchlets, appear during August and continue through September. Of value as a cut flower. For trial throughout the United States except in the warmest localities. (Glenn Dale, Md.)

95327. *HIBISCUS HUEGELII*. Presented by Miss Ida Richardson, Perth, Western Australia. A tall shrub, native to Australia, with three to five-lobed coarsely toothed leaves 1 to 3 inches long, and large violet-purple flowers. For trial in southern California and southern Florida. (Chico, Calif.)

102766. *HYPERICUM HOOKERIANUM*.\* St. Johnswort. From India. Presented by the Lloyd Botanic Garden, Darjeeling. A compact shrub up to 6 feet high, with bright red-brown branches, evergreen leaves 1 to 4 inches long, and many-flowered corymbs of large golden-yellow flowers, each about 2 inches across. Native to the Himalayas. For trial in the lower South and on the Pacific coast. (Glenn Dale, Md.)

102767. *HYPERICUM OBLONGIFOLIUM*.\* St. Johnswort. From India. Presented by the Lloyd Botanic Garden, Darjeeling. A shrub 3 to 6 feet high, native to the temperate slopes of the Himalayas at altitudes of 5,000 to 7,000 feet. The sessile ovate-lanceolate leaves are 1 to 3 inches long, and the nodding flowers, 2 inches across, are white on opening, turning light yellow with age. For trial in the lower South and in southern California. (Glenn Dale, Md.)

24638. *ILEX CORNUTA*.\* Holly. From central China. Presented by the late Rev. J. M. W. Farnham. This holly has spiny, dark-green, glossy leaves, and in winter is loaded with clusters of scarlet berries. While it does not make as symmetrical a crown as does the native Christmas holly, *Ilex opaca*, its attractive foliage and bright-colored fruits render it a fine winter ornamental for the southern half of the United States. Nearly all of the present plants are seedlings. (Chico, Calif.)

91518. *ILEX LATIFOLIA*. Holly. From Japan. Purchased from the Yokohama Nursery Co., Yokohoma. A Japanese evergreen holly, one of the most attractive of the genus, which sometimes develops into a tree 60 feet tall. The glossy green leaves, 3 to 7 inches long, are oval or narrowly oblong, and the red berries, about one-third of an inch in diameter, are produced in dense clusters. Probably hardy as far north as Philadelphia and the Ohio River. (Chico, Calif.)

20127. *INDIGOFERA KIRILOVII*. Kirilow indigo. Collected by the late F. N. Meyer, in the Tchien-shan Mountains, Manchuria. A shrub 3 to 6 feet high with compound leaves made up of 7 to 11 obovate-elliptic leaflets 1 inch long, and dense racemes 6 inches long of rose-colored pea-shaped flowers 1 inch long. It is native to China. For trial in all but the warmest and coldest parts of the United States. (Glenn Dale, Md.)

103932. *IPOMOEA ARBORESCENS*. From Mexico. Received through Harvard Botanic Garden, Soledad, Cienfuegos, Cuba. An erect, woody, treelike plant up to 20 feet high, with twigs and foliage velvety-pubescent; leaves ovate-cordate. The white flowers are 2 inches long. Adapted to a dry cool climate but probably will not withstand frost. For trial in southern California and southern Florida. (Glenn Dale, Md.)

78083. *JASMINUM STEPHANENSE*. Jasmine. Obtained from E. Turbat and Company, Orleans France. A fragrant, hybrid jasmine resembling in general habit the familiar, white *Jasminum officinale* but with pink-tinted buds and flowers suggestive of its other parent, *J. beesianum*. Hardy from Philadelphia south. (Glenn Dale, Md.)

76920. *KENNEDIA MONOPHYLIA*. From Richmond, Australia. Presented by F. H. Baker. A small Australian leguminous vine with single lanceolate to ovate leaflets, and terminal panicles and axillary racemes of flowers ranging from white through rose to purple. The present plants are of a form bearing a profusion of deep-lavender flowers, in early spring. Propagated from seeds and from cuttings of firm green wood. For trial in southern California and southern Florida. (Chico, Calif.)

90663. *LARIX DAHURICA*. Dahurian larch. From Manchuria. Obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, from the Forestry Department of the Agricultural Experiment Station, South Manchuria Railway. A tree which grows to 100 feet in height, with long horizontal branches, reddish or yellowish branchlets, bright-green flattened leaves, and ovoid cones an inch long. For trial in northern states. (Glenn Dale, Md.)

97946. *LARIX DAHURICA*.\* Dahurian larch. From Chosen, Japan. Presented by Mr. Tozawa, Director, Forest Experiment Station, Keijo. Received as variety Koreana. Similar to preceding. (Glenn Dale, Md.)

101282. *LEPTOPTERIS SUPERBA*. Fern. From New Zealand. Obtained from A. Wilkinson, Tauranga. A handsome fern with a stout rhizome forming an erect stem 1 to 3 feet high, native to New Zealand. The filmy, finely-divided leaves are 2 to 4 feet long and broadly lanceolate in cutline. For greenhouse trial, also for outdoor trial especially in the Pacific Northwest; it may prove adapted to some parts of the southern states. (Glenn Dale, Md.)

104556. *MAURANDYA ANTIRRHINIFLORA*. Snapdragon. From France. Received from Museum of Natural History, Paris. A slender perennial vine up to 6 feet high, climbing by means of its coiling petioles and peduncles. The leaves are halberd shaped, and the handsome violet or purple axillary flowers are about an inch long. Native from Texas to California. For trial in the Gulf region and the southwest. (Glenn Dale, Md.)

90716. *MELALEUCA PUBESCENS*. Myrtaceae. From Australia. Presented by G. P. Darnell-Smith, Director, Botanic Gardens, Sydney. A tall shrub or small tree native to Australia, with small linear leaves, half an inch long, crowded on the pubescent branches and small white flowers borne in loose cylindrical spikes. For trial in southern California and southern Florida. (Chico, Calif.)

75567. *MELALEUCA STYPHELIOIDES*. From Melbourne, Victoria, Australia. Obtained from the Melbourne Botanic Gardens, through Miss Anne MacIlvaine, Trenton, N. J. A tall Australian tree, sometimes 80 feet high, with thick spongy bark. The leaves are very small, and the small creamy white flowers are in dense spikes about 2 inches long. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

64491. *MELALEUCA VIOLENCEA*. From Blackwood, South Australia. Presented by W. L. Wheeler, Eden Hills, through Edwin Ashby, "Wittunga." A handsome shrub, native to Western Australia, which, according to Bentham, is low and spreading in habit, with rigid, small, oval leaves, and terminal heads or small clusters of purple-red flowers. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

67086. *MELALEUCA WEBSTERI*. From Blackwood, South Australia. Presented by Edwin Ashby, "Wittunga." An Australian shrub with opposite, narrowly oblong thick leaves about one-third of an inch long, and roundish heads of small white flowers. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

105613. MELIA SP. From China. Received from A. N. Steward, Chang An, Yung Hsien, China, and presented through the University of Nanking. A tree said to grow 30 feet high, which in the young stage has compound leaves much like those of the Chinaberry tree, Melia azedarach. For trial in the southern states. (Glenn Dale, Md.)

101401. METAPLEXIS JAPONICA. From Manchuria. Presented by B. V. Skvortzov, Chinese Eastern Railway, Harbin. A climbing shrubby milkweed, growing to 10 feet long, with opposite cordate undulate leaves and small pale-rose to white flowers in axillary clusters. It grows in dry places. Native to China and Japan. For trial especially in semi-arid regions. (Glenn Dale, Md.)

63629. MYROXYLON SENTICOSUM.\* Flacourtiaceae. From Canton, China. Collected by F. A. McClure, agricultural explorer of the Bureau of Plant Industry. Chinese name Kai na lak. A very ornamental and shapely large shrub or small tree, having dense, glossy foliage, and producing an abundance of small, dark-red fruits which are borne in short-stemmed clusters along the branches. For trial in the warmest parts of California and the Gulf region. (Chico, Calif.)

103934. OPUNTIA STREPTACANTHA. Pricklypear. From Cuba. Presented by the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. A much-branched cactus, sometimes 15 feet high with a trunk 18 inches in diameter. The dark-green obovate to orbicular joints, about a foot long are covered with numerous white spines. The orange-yellow flowers, 3 inches across, are followed by dull-red, globular fruits about 2 inches in diameter. Native to central Mexico, where it was collected by Prof. Juan Balme, botanical explorer. For indoor culture only except in southern California and southern Florida. (Glenn Dale, Md.)

103511. OUGEINIA DALBERGIOIDES.\* From India. Collected at Bhadwar, Kangra, Punjab, by Dr. Walter Koelz, and presented by the Botanical Garden, University of Michigan, Ann Arbor, Mich. An erect leguminous tree, 20 to 40 feet high, with slender gray branches and trifoliolate leaves, the leaflets broadly oval. The numerous whitish to pale-rose flowers are somewhat larger than those of the redbud, Cercis canadensis. For trial in the lower South and on the Pacific Coast. (Glenn Dale, Md.)

101402. PAPAVER NUDICAULE. Iceland poppy. From Manchuria. Presented by B. V. Skvortzov, Chinese Eastern Railway, Harbin. Variety amurense, from the Hingan Mountains, with foliage rather coarser than the type and fairly uniform orange-yellow flowers. For trial in the upper South and in the northern states. (Glenn Dale, Md.)

103001. PASSIFLORA EDULIS. Purple granadilla. From Hawaii. Presented by W. T. Pope, Agricultural Experiment Station, Honolulu. Variety Flavicarpa. A yellow-fruited passion fruit of large size with golden yellow juice of exceptionally fine flavor. For trial in the Gulf region and in southern California. (Glenn Dale, Md.)

103016. PASSIFLORA EDULIS. From Brazil. Presented by P. H. Rolfs, Gainesville, Fla. An edible passion-fruit, over an inch in diameter, sold in a confectionery store at Curatyba, State of Parana. These plants are grown from seed. For trial in the Gulf region and in southern California. (Glenn Dale, Md.)

104916. PHILADELPHUS INCANUS. From France. Received from Vilmorin-Andrieux & Co., 4 Quai de la Megisserie, Paris. An upright shrub, growing usually to 10 feet high, with the young shoots more or less pubescent; leaves obovate to oblong-obovate, serrate, often nearly glabrous above, densely pubescent beneath. The flowers are scentless, about 1 inch across and number 5 to 7 in pubescent racemes. The species is one of the latest to flower. Native to western China. Probably not hardy north of the Ohio River. (Glenn Dale, Md.)

104917. PHILADELPHUS SERICANTHUS. From France. Received from Vilmorin-Andrieux & Co., 4 Quai de la Megisserie, Paris. A handsome shrub up to 12 feet high, very similar to Philadelphus incanus but differs in having slightly narrower leaves, which are nearly glabrous beneath and have red or violet petiole and veins. This species flowers somewhat earlier than P. incanus and is reported to be a little hardier. Native to central and western China. For trial as far north as Ohio and Massachusetts. (Glenn Dale, Md.)

55713. PHYLLOSTACHYS SP. Stake-and-forage bamboo. From China. A hardy evergreen bamboo of running type, up to 25 feet high. This bamboo is easily distinguished from others of similar appearance by the yellowish color of the flattened sides of the internodes during the first year or two when the rounded parts are green. Plants spread by vigorous rhizomes (underground stems), from which new culms arise. Grows to full size only in grove form, in an area at least 40 feet across, and after several years. Grove kept within bounds by artificial means. Culms useful for plant stakes, fishing poles, etc. Use as forage plant is experimental. This bamboo has been previously sent out under the name Phyllostachys nevinii but is now found not to agree with specimens of that species in the Kew Herbarium. Plants withstand temperatures to about zero F. Not less than 25 plants (shipping wt. 25 - 35 lbs.) will be sent to an experimenter. These are for planting in one area to start a grove. The first season, however, the plants should be grown 1½ to 2 feet apart in a nursery row, in well fertilized soil, and be freely watered in dry weather. In the late winter or early spring of the second year transplant with ball of earth to permanent situation, on good well-drained land, spaced 10 feet apart each way. Well-rotted manure or a good commercial fertilizer should be placed in the hole. For trial especially on the Pacific coast. (Chico, Calif.)

75156. PHYLLOSTACHYS FLEXUOSA. From England. Presented by the Royal Botanic Gardens, Kew. A rather small, hardy bamboo of the running type, which grows to a height of 10 feet or more. The linear-lanceolate leaves, usually 2 or 3 on a branchlet, are 2 to 4 inches long by  $\frac{1}{4}$  to  $\frac{1}{2}$  inch wide, medium green above and glaucous beneath. The culms, at first green, become yellowish with age. The habits of this species are similar to those described for the preceding and the general treatment required is the same, but the spacing of the plants in the permanent planting should be 6 to 8 feet. Plants will be furnished in lots of 15 or more. For trial on the Pacific coast. (Chico, Calif.)

12180 and 24760. *PHYLLOSTACHYS RETICULATA* (*P. bambusoides*). Giant timber bamboo. Native to the milder parts of China and Japan. A hardy evergreen bamboo of running type, up to 70 feet high under favorable conditions. It is injured by temperatures near zero Fahr. Small culms useful for same purposes as those of P. I. No. 55713; larger ones, for light construction and numerous other purposes. The conditions for the furnishing of plants and the requirements for culture are similar to those for P. I. No. 55713, but the spacing in permanent planting should be 12 feet; the minimum area required for attainment of maximum growth is about 75 feet across and the time at least 15 years. Available for trial only in the Pacific coast region. (Chico, Calif.)

78375. *PILEOSTEGIA VIBURNOIDES*.\* Hydrangeaceae. From England. Procured from G. Reuthe, Foxhill Hardy Plant Farm, Keston, Kent. A handsome half-hardy Chinese evergreen climber, provided with aerial roots and having lanceolate-elliptic lustrous dark-green leaves 3 to 6 inches long. The small white flowers with conspicuous stamens, borne in large dense umbels, resemble those of *Viburnum tinus*; they come in mid-autumn, when the flowering of other shrubs is nearly past. The plant requires a moderately moist soil and does best in partial shade. It is easily propagated by cuttings. For trial in the South and on the Pacific coast. (Glenn Dale, Md.)

89604. *PINUS BUNGEANA*.\* Lacebark pine. From China. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, in the grounds of the Young Ling Ming Tomb. A slow-growing tree sometimes 100 feet high, native to China, with the bark of mature trees exfoliating in large scales, leaving white areas which on the old trees become chalky white. It is known also as the white-barked pine. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

90469. *PINUS BUNGEANA*. Lacebark pine. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, at the Winter Palace, at Peiping, China. Same description as for preceding (No. 89604). (Glenn Dale, Md.)

92056. *PINUS BUNGEANA*.\* Lacebark pine. Same as for P. I. No. 89604, but obtained in Manchuria. (Glenn Dale, Md.)

82484. *PINUS TABULAEFORMIS*.\* From Chosen. Presented by the Forest Experiment Station, Keijo. A pine up to 75 feet high, with dark-gray bark on the trunk, red on the branches, and orange or greyish-yellow branchlets. The glaucous leaves, usually two in a cluster, are stout and 3 to 6 inches long, and the ovoid cones, 2 to 4 inches long, are pale tawny yellow, changing to dark brown and persisting for several years. For trial in the northern states. (Glenn Dale, Md.)

90793. *PINUS TABULAEFORMIS*. Same description as for preceding number. (Glenn Dale, Md.)

97949. *PINUS TABULAEFORMIS*. Same description as for P. I. No. 82484. (Glenn Dale, Md.)

102954. PLATYCARYA STROBILACEA. Juglandaceae. From China. Collected in Lu Shan, Kiangsi Province, and presented by A. N. Steward, University of Nanking. A bush or small tree or rarely a tree over 60 feet high, with thick dark deeply furrowed bark. The moderately thick branches form a rounded or flattened crown. The leaves, 12 inches long, are composed of 9 to 17 sessile, doubly serrate leaflets, and the brown oval cone-like fruits are over an inch long. For trial from the Ohio River southward. (Glenn Dale, Md.)

62111. POPULUS GENEROSA. Poplar. From Kew, England. Presented by the Director, Royal Botanic Gardens, Kew, through Dr. David Fairchild, Bureau of Plant Industry. This hybrid poplar is intermediate in characters between its parents (Populus angulata and P. trichocarpa.) The leaves are coarsely serrate and pale gray beneath. The tree is a rapid grower and unusually vigorous. For trial in the upper south and in all but the coldest parts of the northern states. (Glenn Dale, Md.)

68170. POPULUS MAXIMOWICZII. Japanese poplar. From Jamaica Plain, Mass. Cuttings presented by the Arnold Arboretum. A very fast-growing and stately tree native to N. E. Asia. It will succeed in the coldest portions of the United States on the poorest and driest soils and at all times it makes phenomenally rapid growth. Its leaves, which are handsomely crinkled like those of Rosa rugosa, appear very early in the spring and remain longer in the autumn than those of almost any other deciduous plant. The tree is said not to be attacked by borers or seriously by leaf-eating insects. It is recommended as a shade tree and windbreak generally, especially for the northwest plains country. (Glenn Dale, Md.)

92522. POPULUS NIGRA BETULIFOLIA.\* Poplar. From Spain. Procured from Juan Levya, la Quinta, Granada. Spanish name Chopo. A form of poplar, striking because of the almost complete absence of true lateral branches, the stems being clothed with twigs which, as is common in poplars, are sooner or later thrown off by separative layers near the base. Because of this habit of growth, the trees can be planted very close together and, as they are rapid growers, they yield an enormous amount of wood. For trial in all except the coldest parts of the northern states. (Glenn Dale, Md.)

58484. POPULUS SUAVEOLENS PRZEWALSKII. Poplar From Echo, Kirin Province, Manchuria. Budwood presented by the Director, Experiment Farm. This is a rather common tree in the towns and villages throughout northern China; it is easily distinguished by its close compact habit. The rather small, oval leaves are prominently whitened beneath. While the tree is comparatively slow growing, it eventually attains large size and it has distinct merit as an ornamental. The tree is said to have especial value for hot dry climates, and it also endures considerable cold. For trial throughout the northern states. (Glenn Dale, Md.)

101291. PRATIA ANGULATA.\* Campanulaceae. From New Zealand. Obtained from A. Wilkinson, Tauranga. A slender creeping herbaceous perennial forming broad matted patches. The stems are 2 to 7 inches long, the rather fleshy ovate to orbicular leaves, less than one half inch long, are sinuate-dentate, and the auxillary flowers, less than 1 inch long, are white with purple streaks. It is native to New Zealand. For trial in the milder parts of California and in the Gulf region. (Chico, Calif.)

105622. *PTEROCARYA STENOPTERA*. Juglandaceae. Chinese wingnut. From China. Presented by A. N. Steward, Nanking. A handsome ornamental tree up to 60 feet high, with pinnate leaves 6 to 12 inches long having oblong, acute leaflets 2 to 4 inches long. The long pendulous catkins when the tree is in flower or fruit add to its attractiveness. For trial on the Pacific coast and in the southern states. (Glenn Dale, Md.)

43793. *PUNICA GRANATUM*. From China. Collected in the Botanic Garden at Peiping by the late F. N. Meyer, agricultural explorer, Bureau of Plant Industry. Variety Nana. A very dwarf, double-flowered variety which bears large numbers of highly acid fruits, too small to be of value. The plants are used for pot culture in China, and in California have proved useful for hedges from San Francisco southward. For trial in the Gulf region and the southwest. (Chico, Calif.)

80408. *PYRACANTHA ATALANTIOIDES*. Firethorn. Presented by Vilmorin-Andrieux & Co., Paris, France. A more or less spiny shrub 9 feet or more high, native to central and western China, with rigid branches and small leaves varying from more or less oblong to lanceolate or elliptic, the margins more or less crenate-serrate, bright green above, paler beneath. The white or creamy white flowers are in rather dense corymbs nearly 2 inches across and are followed by brilliant crimson, globose fruits  $\frac{1}{4}$  inch in diameter. For trial in the south and on the Pacific coast. (Glenn Dale, Md.)

99199. *PYRACANTHA CRENATO-SERRATA*. Firethorn. From Kweichow Province, China. Presented by Albert N. Steward, College of Agriculture, University of Nanking. A spiny evergreen shrub up to 9 feet high, with young branchlets rusty-pubescent, and elliptic to obovate-oblong leaves about 1 to 2 inches long, lustrous dark green above and lighter beneath. The coral-red fruits are a quarter of an inch across. (Few plants available.) For trial in the southern half of the United States. (Chico, Calif.)

94206. *RHAPIDOPHYLLUM HYSTRIX*. Needle palm. Presented by Dr. B. W. Hunt, Eatonton, Ga. An attractive hardy dwarf fan palm, native to the lowlands of South Carolina, Georgia and Florida, but very local in its distribution. It is now quite rare, and appears to be approaching extinction as a wild plant. The 2 to 3-foot stems are erect or creeping, with leaves dark shiny green above and silvery gray beneath. Slender, sharp black spines up to a foot long, project from the trunk in every direction and also surround and protect the inflorescence. The staminate and pistillate flowers are borne on separate plants. For trial on the Pacific coast and in the South Atlantic and northern Gulf regions. (Chico, Calif.)

95067. *RHUS VIMINALIS*. From the Union of South Africa. Presented by F. Walton Jameson, City Engineer, Kimberley. Native name karree boom. A hardy evergreen tree up to 30 feet high and of equal spread, reported to withstand drought and some frost. It grows readily from seeds, cuttings, or poles or stumps set in moist ground and kept moist until growth starts. The tree is said to prefer a thin, limestone soil but to thrive on other soils. It is considered an excellent timber for gate and fence posts. In South Africa, sheep and goats are reported to browse on the foliage, and the sweetish fruits to be eaten by children and poultry. The karree boom should be tested as a street or shade tree as it is stated to be hardier and more ornamental than Schinus molle, which it resembles in habit. For trial more especially in the southwest but also in less humid localities of the Gulf region. (Chico, Calif.)

17737. *SALIX MATSUDANA UMBRACULIFERA*. Willow. From China. Collected by the late F. N. Meyer, agricultural explorer, Bureau of Plant Industry. A handsome hardy Chinese willow with a dense, flattened-globular crown. The branches are long, slender, and tinged with red toward the tips. Probably hardy throughout the northern United States. (Glenn Dale, Md.)

103328. *SILENE SP.* Catchfly. From southwestern China and Tibet. Collected on the Mekong River, at 7,000 feet altitude, by Dr. Joseph F. Rock, agricultural explorer, and presented by Dr. T. H. Goodspeed, Department of botany, University of California, Berkeley. An alpine herb with narrowly ovate leaves about 5/8 inch wide, acute at the tip and attenuated into a very long petiole at the base. For trial in the South and especially on the Pacific Coast. (Glenn Dale, Md.)

103329. *SILENE SP.* Catchfly. From southwestern China. Collected at 11,000 feet altitude by Dr. Joseph F. Rock, agricultural explorer, and presented by Dr. T. H. Goodspeed, Department of Botany, University of California, Berkeley, Calif. An alpine herb with purple flowers and opposite, oblong-ovate leaves  $\frac{1}{4}$  inch or more wide, acute at the tip, the lowermost on the stem attenuated into a rather long petiole. For trial in the South and especially on the Pacific coast. (Glenn Dale, Md.)

21967. *SOPHORA DAVIDII*. From Chianfu, Shantung, China. Obtained by the late F. N. Meyer, agricultural explorer. A spiny leguminous shrub growing 6 to 10 feet tall, bearing small pinnate leaves, loaded with small violet-tinted whitish flowers in spring. Chinese name, Kuei tsi ching. It may be used as a hedge plant and is somewhat drought resistant. It requires pruning when grown as an ornamental in the south. For trial in all except the warmest and coldest parts of the country. (Chico, Calif.)

84237. *SPIRAEA SP.* From southwestern China. Collected by Dr. J. F. Rock, National Geographic Society, Washington, D. C. A deciduous shrub about 5 feet high, with oval rounded dull-green leaves up to  $\frac{1}{4}$  inch long, crenate-serrate above the middle, and white flowers. In foliage characters this suggests *S. canescens*. Native to southwestern China. For trial in the southern states and on the Pacific coast. (Glenn Dale, Md.)

100606. *SPIRAEA SP.* From China. Obtained by the sixth Forrest expedition to southwestern China, and presented by Maj. Lionel de Rothschild, London, England. A deciduous shrub, native to southwestern China, with reddish, angled stems and rounded-obovate, dull-green leaves up to 5/8 inch long. Said to be related to *Spiraea arcuata*, which is a small stout shrub with dense corymbs of small red flowers. For trial in the Gulf region and on the Pacific coast. (Glenn Dale, Md.)

102963. *SPIRAEA SP.\** From Nanking, China. Collected in Lu Shan, Kiangsi Province, and presented by A. N. Steward, University of Nanking. a deciduous shrub with dull gray-green, rounded-ovate, incised-serrate, usually 3-lobed leaves sometimes nearly 2 inches long. Resembles *S. trilobata*, in foliage characters. Native to southeastern China. For trial in the Gulf region and in southern California. (Glenn Dale, Md.)

103347. SPIRAEA ARCUATA. Spirea. From southwestern China. Collected by Dr. Joseph F. Rock, in the Yetsi mountains, Muli Territory, Szechwan, and presented through Dr. T. H. Goodspeed, University of California. A bushy shrub 6 to 8 feet high with shining dark-brown branches and small obovate, coarsely toothed or lobed leaves; leaves one half inch long. The small flowers which vary from red to white, are in dense corymbs. Native to the Himalayan region between 11,000 and 14,000 feet altitude. For trial in the lower South and on the Pacific coast. (Glenn Dale, Md.)

105638. STYRAX SP. From China. Obtained from A. N. Steward, Ta Tseh Shan, Yung Hsien, China. A low shrub found growing at the forest edge. The known species of *Styrax* have fragrant, pendulous, white flowers. For trial in the northern Gulf region and on the Pacific coast. (Glenn Dale, Md.)

91833. SYRINGA TOMENTELLA. Felty lilac. From Scotland. Presented by W. Wright Smith, Regius Keeper, Royal Botanic Garden, Edinburgh. A bushy shrub, about 10 feet high, with elliptic leaves which are hairy beneath, and loose, long-branched spikes of fine mauve-pink flowers, produced in late May and early June. It is native to western China. For trial in the milder parts of the northern states and on the Pacific coast. (Glenn Dale, Md.)

91834. SYRINGA YUNNANENSIS. Yunnan lilac. From Scotland. Presented by W. Wright Smith, Regius Keeper, Royal Botanic Garden, Edinburgh. A handsome shrub of open spreading growth, related to *Syringa wilsonii*, but with pale-pink flowers in large panicles, produced in June. The downy leaves have a distinct red midrib, the color being continued through the leaf stalk. Native to China. For trial in the milder parts of the northern states. (Glenn Dale, Md.)

92069. TILIA MANDSHURICA. Manchurian linden. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A tree to 65 feet high. The leaves, 3 to 6 inches long, are orbicular-ovate, short acuminate, coarsely serrate, sometimes indistinctly lobed, slightly pubescent above and tomentose beneath without axillary tufts. Flowers in brownish tomentose cymes; fruit more or less 5-ribbed. For trial in all but the coldest parts of the northern states. (Glenn Dale, Md.)

103921. TOUNATEA MADAGASCARIENSIS.\* From Africa. Received from Rev. Kenneth Prior, Angola. A tropical leguminous tree, 12 to 30 feet in height, with compound leaves about 6 inches long, having 9 to 11 leathery oblong leaflets. The roundish yellow flowers, about 1 inch across, are solitary or in small racemes. The heavy wood is deep red in color and is said to be excellent for piano manufacture and good for all high-class furniture work. Native to south central Africa and Madagascar. For trial in extreme southern parts of Florida and California. (Glenn Dale, Md.)

102731. TRIPALARIS CUMINGIANA. Polygonaceae. From Cuba. Presented by the Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. An ornamental tropical tree about 20 feet high, generally pyramidal in habit, which prefers moist situations along the borders of lakes and streams. From February until the middle of April it is ablaze with red, produced by the bracts surrounding the capsules, and forms an exceedingly striking object in the landscape. The tree is native to Panama. For trial in extreme southern Florida and the most nearly frost-free situations in southern California. (Glenn Dale, Md.)

80214 and 97822. TURRAEA OBTUSIFOLIA.\* Meliaceae. From Los Angeles, Calif. Presented by P. D. Barnhart. An attractive dwarf evergreen shrub 4 to 6 feet high which bears, between October and March, an abundance of white flowers having slender petals about an inch long. Native to southern Africa. For trial in southern California and the Gulf region. (Chico, Calif.)

81909. VACCINIUM SP. From Japan. Collected at an altitude of 1600 feet on Moiwayama near Sapporo, Hokushu, by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A deciduous shrub 12 to 18 inches high, with ovate acute leaves. The plant resembles Vaccinium hirtum in foliage characters. (Glenn Dale, Md.)

100616. VACCINIUM FRAGILE. Blueberry. From China. Collected by the sixth Forrest expedition, 1930-32, to southwestern China, and presented by Maj. Lionel de Rothschild, London, England. A low shrub, native to western China, with small rigid, broadly oval leaves about one half inch long and small rose-purple flowers in dense thyrsoid racemes 1 to 2 inches long, followed by small globose fruits. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

100906. VACCINIUM FRAGILE. Blueberry. From China. Collected by the sixth Forrest expedition 1930-32, to southwestern China, and presented by Lord Aberconway, Bodant, Tal-y-cafn, N. Wales. Same description as for the preceding (P. I. No. 100616). (Glenn Dale, Md.)

103508. VALLARIS HEYNEI. Apocynaceae. Burma vallaris. From India. Received from Walter Koelz, Bhadwar, Kangra, Punjab, through the University of Michigan, Ann Arbor. A climbing shrub with fragrant white flowers three-fourths of an inch wide, often cultivated as an ornamental in India, where it is native. For trial in southern Florida and southern California. (Glenn Dale, Md.)

97712. VERBENA BONARIENSIS. From England. Purchased from Maurice Pritchard & Sons, Riverslea Nurseries, Christchurch, Hants. A rough perennial, native to Brazil, with widely branching stalks 2 to 4 feet high, from rosettes of coarse basal leaves. The small bright-purple flowers are borne in flat-topped clusters about an inch across that often form six-inch heads. For trial throughout the United States, - in the North as an annual. (Glenn Dale, Md.)

89357. VERONICA ANETIDA.\* Scrophulariaceae. From New Zealand. Procured from Duncan & Davies, Ltd., New Plymouth. No place of publication of the name Veronica anetida has been found. The plant is an attractive small shrub, apparently a species of Hebe, branching at and above the base. The closely 4-ranked, sessile, dark-green leaves are ovate acute and one-third inch long. For trial in the southern states and on the Pacific coast. (Glenn Dale, Md.)

101909. VIBURNUM SARGENTI. Sargent Cranberrybush. From Chosen. Presented by the Director, Forest Experiment Station, Keijo. A strong-growing shrub 10 to 15 feet high, somewhat resembling Viburnum opulus, with broadly ovate 2-lobed leaves and large clusters of bright-red fruits which are very attractive. For trial in all but the coldest parts of the northern states. (Glenn Dale, Md.)

103509. WOODFORDIA FRUTICOSA.\* From India. Collected and presented by Dr. Walter Koelz, University of Michigan, Ann Arbor, Mich. From Bahdwar, Kangra, Punjab, at 2,000 feet altitude. An attractive somewhat scandent shrub up to 8 feet high found on open abrupt slopes in sunny situations. It is covered from 6 to 8 weeks with attractive red flowers. For trial in southern Florida and southern California. (Glenn Dale, Md.)



